

## Classwork 2/5/10

① Solve for y

$$\textcircled{a} \quad 3y - 14 = 52$$

$$\quad \quad +14 \quad +14$$

$$y \cdot 3 \quad \frac{3y}{3} = \frac{66}{3}$$

$$-14 = 52$$

$$+2+4$$

$$\div 3 = y$$

$$y = 22$$

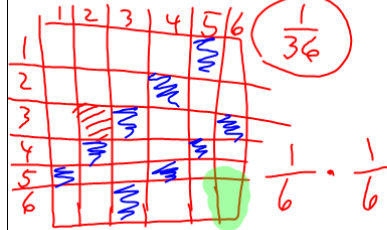
$$\boxed{y = 22}$$

$$\textcircled{b} \quad 3x + 2y = 4$$

$$\begin{array}{r} 3x + 2y = 4 \\ -3x \phantom{+ 2y} = -3x \\ \hline 2y = 4 - 3x \\ \div 2 \phantom{+ 2y} \phantom{= 4 - 3x} \\ \hline y = 2 - 1.5x \end{array}$$

$$\boxed{y = 2 - 1.5x}$$

② If you roll two 6-sided dice, What is the probability of

$$\textcircled{a} \text{ getting a } 1^{\text{st}} \text{ 2 then a 3}$$


$$\boxed{\frac{1}{36}}$$

$$\textcircled{b} \text{ getting a sum of 12}$$

$$\boxed{\frac{1}{36}}$$

$$\textcircled{c} \text{ getting a sum of 6 or 9}$$

$$\frac{9}{36} = \boxed{\frac{1}{4}}$$

③ If you draw 2 cards from a standard deck without replacing, Find the probability of
$$\textcircled{a} \text{ getting a heart and then a heart}$$

$$\frac{13}{52} \cdot \frac{12}{51} = \frac{156}{2652}$$

$$= \frac{1}{17}$$

$$\textcircled{b} \text{ getting an Ace then an Ace}$$

$$\frac{4}{52} \cdot \frac{3}{51}$$

$$\frac{12}{2652} \text{ or } \frac{1}{221}$$

$$\textcircled{c} \text{ getting an ace or spade on the first draw}$$

4 Aces  
13 spades  
but  
1 ace is a spade

$$\frac{16}{52} \text{ or } \frac{4}{13}$$

Point-slope to slope-intercept

$$y = m(x - x_1) + y_1$$

$$y = mx + b$$

$$y = 2x - 4$$

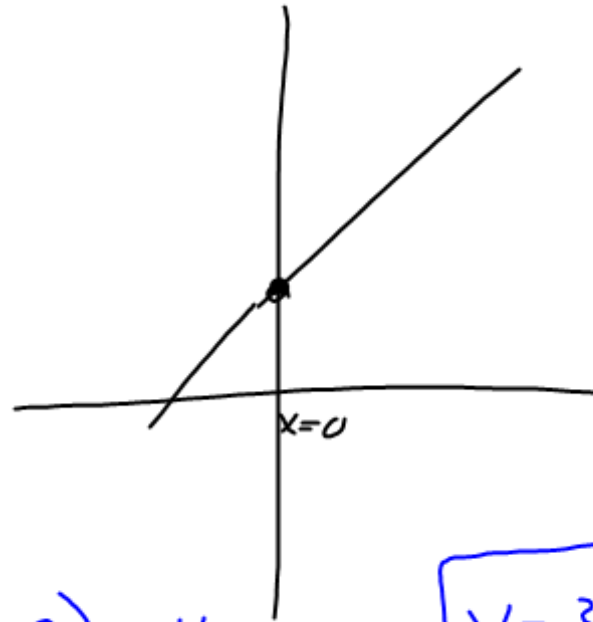
$$y = 2(x - 5) + 6$$

$$y = 2(\underline{0} - 5) + 6$$

$$y = 2(-5) + 6$$

$$-10 + 6$$

$$y\text{-int} = -4$$



$$y = 3x + 2$$

$$y = 3(x + 2) - 4$$

$$y\text{-int} = 3(\underline{0} + 2) - 4$$

$$3(2) - 4 = 2$$

convert each equation to slope-intercept form.

$$y = mx + b \rightarrow \begin{array}{l} \downarrow \\ \text{slope} \end{array} \rightarrow \text{y-int}$$

①  $y = 3(x-2) + 7$

$$3(0-2) + 7$$

$$3 \cdot -2 = -6 + 7$$

$$-6 + 7 = 1$$

~~$y = 3x - 6 + 7$~~   $y = 3x + 1$

②  $y = \frac{1}{2}(x+4) - 1$

$$.5(0+4) - 1$$

$$.5 \cdot 4 = 2 - 1$$

$$= 1$$

$$y = 0.5x + 1$$

③  $y = -2(x-5) - 8$

$$y = -2(0-5) - 8$$

$$y = -2(-5) - 8$$

$$y = 10 - 8$$

$$\text{y-int} = 2$$

$$y = -2x + 2$$

Do Sect. 5.4 #2-5

2. Rewrite each equation in intercept form. Show your steps. Check your answer by using a calculator graph or table.

a.  $y = 14 + 3(x - 5)$

b.  $y = -5 - 2(x + 5)$

c.  $6x + 2y = 24$

3. Solve ~~each equation by balancing and tell which property you used for each step.~~

a.  $3x = 12$

b.  $-x - 45 = 47$

c.  $x + 15 = 8$

d.  $\frac{x}{4} = 28$

4. Solve each equation for  $x$ . Substitute your value into the original equation to check.

a.  $35 = 3(x + 8)$

~~b.~~  $\frac{15 - 3}{x - 4} = 10$

c.  $4(2x - 5) - 12 = 16$

5. An equation of a line is  $y = 25 - 2(x + 5)$ .

a. Name the point used to write the point-slope equation.

b. Find  $x$  when  $y$  is 15.

$$y = \underset{\substack{\downarrow \\ m}}{-2}(x + \underset{\substack{\downarrow \\ p + a}}{5}) + 25$$



**11. APPLICATION** Dorine subscribes to an Internet service with a flat rate per month for up to 15 hours of use. For each hour over this limit, there is an additional per-hour fee. The table shows data about Dorine's first two bills.

Internet Use

Month	Logged on (hr)	Monthly fee (\$)
January	20	15.20
February	23	17.75

- Define your variables and use the data in the table to write an equation in point-slope form that models Dorine's total fee.
- During March, Dorine was incorrectly charged \$20 for being logged on for 25 hours. What should be her correct total fee?
- In April, Dorine was logged on for 14 hours. What was her total fee that month? Explain why you can't use your equation to answer this question. (Hint: Reread the problem carefully.)
- How many hours was Dorine logged on during a month when her fee was \$23.70?

HW

5.4 #11